

# Teaching in the *tender* years

*As drug use drops down the age range, the risk that teaching about drugs in the primary school might incite interest has to be set against the risk of leaving it all too late. Two of Britain's leading experts assess the evidence.*

by **Charlie Lloyd and Ruth Joyce**

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Educating pre-adolescent children about drugs may seem unnecessary and risky – it could arouse interest when none was there, and be seen as an admission that the school has a drug problem. Only if it ‘works’ would the risks be worthwhile. ‘Works’ here will mainly take the form of delaying onset of drug use rather than curbing current use. Drug use generally starts with the most available drugs: in our culture, tobacco, alcohol and cannabis. Does delaying their use matter? There are reasons for believing it does.

‘Gateway’ theorists argue that use of more socially acceptable drugs is a prerequisite for moving on to those less acceptable; smoking tobacco is a gateway to smoking cannabis, cannabis a gateway to other illegal drug use.<sup>1</sup> The argument is plausible and supported by research. Tobacco (and to a lesser extent alcohol) use has repeatedly been found to predict later cannabis use, and early use of illicit drugs is linked with later drug problems. Such links have suggested that “early prevention efforts targeting the avoidance of youths’ initiation with alcohol and cigarettes may reduce the use of marijuana, and prevention of early use of marijuana may reduce involvement with other illegal drugs”.<sup>2</sup>

## Missing the boat?

The obvious but key point is that *delaying initiation into drug use requires action to be taken before drug use has started*. Youngsters often smoke tobacco whilst still at primary school.<sup>3</sup> Well before actual use, ideas and feelings about drugs are developing. By avoiding abstract language, ‘draw and write’ techniques show that children as young as five have some understanding, even about illegal drugs.

So there seems a risk in *not* starting drug education in the primary school and (if existing knowledge is carefully gauged) little to fear. Yet drug education remains overwhelmingly focused on children over 11 – for many, too late to delay initiation, and likely to be so for more as age of first use decreases.<sup>4</sup> New UK drug education packages are not narrowing this gap<sup>5</sup> and only a minority of British primary schools have implemented preventive programmes.<sup>6, 7</sup>

There remains the issue of whether in-

tervening early *actually* does some good and what are the best approaches. Some clues can be gleaned from reviews of drug education across the compulsory schooling age range.<sup>8, 9, 10, 11, 12</sup> Effective programmes tend to be:

- ▶ intensive and long-term;
- ▶ incorporate pupil-teacher and pupil-pupil interaction rather than simply didactic presentations of information by teachers;
- ▶ multiply-focused on parents and communities as well as schools;
- ▶ aimed at developing pupils’ lifeskills such as communication, assertiveness, other social skills, and decision-making.

How does this square with what we know of primary school interventions? In assessing the evidence, this review considers only programmes focused on illicit drug use<sup>13</sup> and, for research from outside the UK, on stud-

ies which report drug use outcomes. For the UK it also embraces selected studies of ‘process’ issues involved in implementing programmes, or changes in ‘intermediate’ variables thought to be related to drug use.

## Home-grown evaluations

The only British study to assess the impact of primary school drug education on drug use is the evaluation of Project Charlie,<sup>14</sup> a broad-based information and lifeskills programme aiming to equip pupils to resist later drug offers from their peers. The evaluation (▶ *Charlie shows promise*) generated evidence that the programme can delay tobacco and illegal drug use. However, unless replicated in more substantial studies these results can only be considered promising.

The remaining British studies deal with process issues and intermediate ‘outcomes’, often at barely more than the anecdotal level. Certainly a cut above this, perhaps the most interesting study examined the impact of Drug Abuse Resistance Education (DARE) on year-six children (10–11 years of age) attending a school in Mansfield where two other schools acted as controls.<sup>15</sup> DARE, a US programme delivered by police officers, is gaining momentum in the UK. It focuses on skills to resist drug offers; other elements are building self-esteem and decision-making skills and imparting drug information.

Pupils were tested before and after the intervention. In their measures of attitudes and drug-related knowledge, researchers found no “general patterns of development” attributable to DARE, but there were some gains. For example, children exposed to DARE were more likely to recognise that drugs can be harmful. Recommendations included making the social skills element of the curriculum more drug-specific and enhancing “interactive components ... at the expense of ‘inputs’ from the DARE officers”.

In Northumberland a one-off project gave a lasting boost to drug education in middle schools.<sup>16</sup> An assessment of the needs of teachers, pupils and parents at all 18 schools enabled the programme to be tailored to local needs. This data later formed a baseline from which to assess progress. After a half-day of training, teachers delivered the pro-

## CAPSULE

- ▶ Later drug misuse is associated with early use of tobacco and alcohol. To prevent or delay such use education must start in the primary school.
- ▶ The only UK outcome evaluation suggests that a broad-based, life skills programme could prevent drug use. Other studies have shown the feasibility of primary school drug education and some improvements in variables thought to be related to later drug use.
- ▶ Outside the UK, studies of two popular approaches (DARE; Life Education Centres) have mainly been inconclusive or disappointing.
- ▶ However, there is evidence that long-term, intensive programmes, especially those which involve parents and the wider community and employ interactive teaching styles, can reduce later drug use.
- ▶ Practice implications include initiating long-term, intensive programmes in primary schools based on interactive teaching methods, which are linked to and consistent with those in local secondary schools.
- ▶ Involving parents enhances impact and is more feasible at primary than secondary level.
- ▶ Knowledge about drugs must be supplemented by developing the skills to identify and communicate feelings, and take decisions in a social setting.

gramme to year-five pupils (aged 9–10) in four hour-long sessions in a single week. During the week an evening meeting informed parents about the programme and about drugs, and involved them in their children's drug education. After the intervention, teachers reported improved drug-related knowledge and confidence; pupils gave more realistic responses to drug discovery scenarios; and parents showed more confidence and support for drug education. The intervention also provided a model for continuing drug education in most of the schools.

Reports from London<sup>17</sup> and Avon<sup>18</sup> have shown that locally produced primary school teaching materials can be acceptable to teachers and considered effective teaching tools.

### Pupil-to-pupil approaches

Already noted is the superiority of interactive teaching methods. The ultimate in interactivity is to enable children to *devise* and *deliver* the education as well as receive it – pupil-to-pupil education or 'peer' education if educators and educated are roughly the same age. However, reports from secondary schools show things can go badly wrong (chaos and disruption in the classroom) if peer educators lack teaching skills; slightly older pupils seem more likely to receive respect in the classroom.

Uncomfortable about handing control to pupils and about methods such as role play, teachers sometimes curtail peer programmes, accounting for some apparent failures. Impacts are easiest to demonstrate for the educators rather than the educated; such impacts may be the chief intended outcome.

A UK evaluation of pupil-to-pupil drug education reported on a play performed by year 10 and 11 secondary pupils to year six primary pupils.<sup>19</sup> Mounting the play needed special funding and entailed considerable preparatory and follow up in the recipient schools. The audiences enjoyed the experience and retained some clear safety and anti-drug messages.

One school used the play as an assessed piece of year 11 drama work, giving it a 'legitimate' place in the curriculum. Focusing drug education on such concrete outputs (plays, posters, leaflets, videos) can double up as a form of communications/media education, the results of which can be used to involve and inform parents and other pupils. In another primary school, year six pupils produced a video shown to parents; perhaps because it featured nearly all the children, parental attendance was unusually high.<sup>20</sup> Six months after they had left primary school the video-makers had retained "knowledge and understanding of drugs and a greater confidence in their own abilities to deal with new situations, particularly those in which drugs might be on the menu".

### Lessons from abroad

Even outside the UK few studies have focused on primary school-age drug preven-

### Charlie shows promise

Pupils exposed to Project Charlie in two primary schools were recontacted four years later when at least 13½ years of age. The most stringent test of the curriculum compared pupils from a school where year-five classes (aged 9–10) had been randomly allocated to Project Charlie or to no drug education (the control group). Project Charlie pupils were significantly less likely to have tried tobacco. With respect to drinking alcohol there was no difference and the numbers trying illegal drugs were too small to generate significant results.

Project Charlie pupils from both schools were also compared with later classmates in secondary school. Tobacco and illegal drug use

were significantly less common among Project Charlie pupils (a third as many had tried illegal drugs), but there was no way of excluding the possibility that this was due to other factors.

Project Charlie had not improved decision-making skills or drug-related knowledge, but did seem to have significantly enhanced ability to resist peer pressure and increased negative attitudes to drugs.

Samples in this study were small (in the randomised groups, just 20 and 14) and while all the statistically significant outcomes favoured Project Charlie, some non-significant trends (especially relating to alcohol use) were in the opposite direction.

tion. Major exceptions are US studies of DARE and the mainly Australian studies of Life Education Centres. Both programmes have a considerable following in the UK so warrant special attention.

### Bring in the police?

In the USA, DARE is usually delivered by uniformed police officers to children aged 10 to 12 in 17 weekly lessons of about 45 minutes. The five most rigorous evaluations published in academic journals are summarised below.

In two US studies DARE had the intended impact on attitudes to drugs but in one, no impact on drug use or intentions to use<sup>21</sup> and,

▶ ▶ ▶ *the obvious but key point is that delaying initiation into drug use requires action to be taken before drug use has started.*

in the other, an impact on alcohol use but none on tobacco or cannabis use.<sup>22</sup> In both, short follow-up periods (meaning pupils were not yet old enough to use drugs in any numbers) mitigated against finding impacts on drug use. Another study in Illinois faced the same problem but did report a temporary impact on tobacco and alcohol use which a year later had disappeared.<sup>23,24</sup>

Two US studies did employ follow up periods long enough to observe drug use outcomes. In one the impacts on attitudes to drugs and ability to resist peer pressure seen a year after DARE were not sustained at five years.<sup>25</sup> In the second the time trend was reversed: DARE had no impact at three-year follow-up but at six years significantly fewer boys (roughly a quarter less) had tried 'outsider' drugs (inhalants and illegal drugs other than cannabis).<sup>26</sup> For the sample as a whole results were equivocal and there was no impact on girls or on more accepted forms of

drug use – tobacco, alcohol and cannabis.

DARE's unconvincing results may be partly due to a teaching style which lacks the interactivity found to maximise impacts. Police training and ethos may be incompatible with such approaches.<sup>27,28</sup> More generally, outsiders drafted in to do lessons may (even more so than teachers) lack the required skills or feel uncomfortable with allowing children leeway to interact on the contentious topic of illegal drugs.

### Roadshows please but do they prevent?

Originating in Australia, Life Education Centres are mobile units delivering drug education at primary and secondary schools. In the UK they target both legal and illegal drugs. Using audio-visual aids such as puppets and illuminated models of body systems and organs, the aim is to help children make responsible decisions about themselves and their bodies by illustrating how drugs affect the body. Staged components are offered each year, aiming to complement the school's in-house programme. Classes last 30 minutes to two hours, but teachers are encouraged to run preparatory and follow-up sessions

As with DARE, evaluation has proved contentious. Two studies have shown the Centres to be popular with teachers, who report positive impacts on children.<sup>29,30</sup> These and other studies have also examined outcomes, but each had serious methodological flaws.<sup>31,32,33</sup> Even the most sophisticated study was not able to randomly allocate schools to Life Education versus control conditions.<sup>34</sup> The Centres appear popular with children, teachers and parents, but their impact on behaviour remains an open question.

### Other approaches

DARE and Life Education Centres are major players, but many other – in some cases, more promising – programmes have been shown to affect attitudes, knowledge, resistance skills and intentions. Four that have been followed up for long enough to examine impacts on behaviour are briefly

## Practice implications – tinkering will not be enough

The evaluation literature is too thin (especially in the UK) to form the sole support for practice recommendations, so these suggestions also draw on what we know of the UK education system, and what we can extrapolate from experience and from other sectors.

**Start in primary school**

- ▶ Primary schools should build drug education into development plans and their brochures should outline the school's approach to drugs.
- ▶ Local education authorities and drug action teams should encourage and enable primary school staff, governors and parents to develop and support drug education.
- ▶ Teacher training institutions need to include drug education in their basic programmes, especially for primary sector teachers.
- ▶ Information on where children are 'starting from' can help tailor curricula to pupil needs, reducing the risk of introducing over-sophisticated and unnecessary information too early.

**Make it long-term and intensive**

- ▶ Long-term, intensive programmes have the greatest impact.
- ▶ It is important to place drug education on the agendas of primary–secondary linkage structures such as liaison officers and cross-phase families of schools.
- ▶ Common staff drug training programmes across primary and secondary levels have been used to facilitate a consistent approach.<sup>40</sup>
- ▶ The first years of secondary schooling are the ones most under pressure from the statutory curriculum. Significant relaxing of curriculum pressure may be needed to ensure continuity from primary school.

**Involve parents and communities**

- ▶ Involving parents enhances effectiveness. This is more feasible at primary than secondary level because parent-school contact is closer, more regular and more local.
- ▶ Parents should be extensively involved in the development or review of school drug policies.
- ▶ Teachers should consider the opportunities for involving parents in the selection or devel-

opment of drug education resources.

- ▶ Parental involvement can be a route to, and one aspect of, wider community reinforcement of drug education, helping prevent school-based activities being 'overwhelmed' by the wider environment.

**Focus on lifeskills**

- ▶ Knowledge about drugs must be supplemented by developing the language and skills to identify feelings, communicate these to others, and take decisions in a social setting. The natural locus for this is the personal, social and health education curriculum.
- ▶ As a start schools may want to audit their social and lifeskills development activities.
- ▶ Drug education's locus in the science curriculum gives the information element statutory status, not the skills elements. Overcoming this entails reconfiguring the curriculum to create space for skills development.
- ▶ To introduce topics such as drug education, schools need flexibility to manage their timetables. This has been reduced by the restrictive targets on which their performance is judged.
- ▶ Primary schools should support the development of a nationally accepted personal, social and health education curriculum.
- ▶ Initial teacher training courses show passing, if any, reference to lifeskills training. This and the in-service training needs of existing teachers will have to be addressed.

**Be interactive**

- ▶ Evidence that interactive teaching is more effective than didactic presentations has major implications for teacher training.
- ▶ There may be a need to refocus training on teaching methods rather than subject expertise.
- ▶ School administrative systems must be supportive of this teaching style. Practical issues such as the influence teachers have over class size and rooms are important.
- ▶ Sophisticated assessment, monitoring and recording tools will be needed to ensure that teaching achieves the prescribed objectives.
- ▶ Interactive teaching makes heavy demands on classroom management. Outside speakers/

visitors may not have the necessary skills; their use should be carefully planned, monitored and evaluated.

- ▶ Even in primary schools, pupil involvement can profitably be extended to school policy making over drug education and the handling of drug-related incidents.<sup>41</sup>

**Peer approaches: promising but tricky**

- ▶ Peer education shows promise but remains largely ill-defined and unproven, posing potential pitfalls if peer educators are insufficiently prepared. At the moment it may be more realistic to expect and work for benefits for the *educators* as much as, or more than, the *educated*.
- ▶ Peer educators must be selected for their credibility with the audience and trained and provided ongoing support. Careful planning is essential, including preparation and follow up of recipient classes.
- ▶ Problems may be minimised by using slightly older pupils trained not just in drug knowledge, but also in the teaching skills needed to maintain order in a class of younger near-peers.
- ▶ Pupils recently graduated to secondary school may have more credibility, but an overcrowded curriculum means within-school approaches are more feasible.
- ▶ Crediting the outputs of peer educators as achievements in other subjects can help create curriculum space for their work.
- ▶ The production of materials or events such as plays gives a focus to the activity, provides a concrete achievement, and can be used to involve parents.

**Targeting 'at-risk' pupils unproven**

- ▶ Targeting pre-teens thought to be at high risk of later drug use is of doubtful efficacy and could amplify their risk behaviour through labelling and grouping such pupils together.
- ▶ Many 'high risk' pupils, though later absent or excluded from secondary school, will attend primary school and can be reached there through universal approaches.
- ▶ Pupils cannot be influenced by school-based activities if they are not there. Strategies which support schools in retaining pupils are vital.

described below.

Most promising was the Australian Illawarra programme.<sup>35, 36</sup> Aimed at pupils aged 10–11 in the last year (year six) of primary school, it covered legal and illegal drugs. First an evening meeting at school informed parents about the programme, then their children were introduced to it by year seven pupils from the previous year's programme. Six teaching units totalling 12 to 16 hours over several weeks covered decision-making, drug-related problems, alternatives to drug misuse, social pressures to take drugs, conformity, assertiveness and peer resistance skills. During this period there was a second parents' evening after which children worked

in groups to produce drug-related materials and a short piece of drama, another 12 to 16 hours of work which culminated in a presentation to parents. The following year the pupils returned to their former primary school to introduce the programme to the new grade six pupils.

Compared to controls, four and a half years later significantly fewer of the Illawarra children had ever used tobacco or cannabis but roughly the same number had tried alcohol. Also, levels (frequency/intensity of use) of tobacco use were (especially initially) lower and so was alcohol use in all but one of the follow-up years. The researcher argued that drug education should involve parents,

peers and teachers as well as the children, and should be continued/reinforced in some form into secondary school.

In the US 'New Hampshire' study, one of three rural communities formed a control group. The second received education on skills to overcome social pressures to use drugs, and the third education reinforced by a comprehensive community intervention including parenting courses and a community task force.<sup>37</sup> Three years later the targeted 9–14-year-olds were reassessed. Neither intervention delayed cannabis use (relatively normal in these communities), but the community intervention cut *regular* cannabis use by over 50%.



'Say Yes First' was a five-year programme which adjusted the intensity of the intervention to the 'risk' level of 9–14-year-old rural US pupils.<sup>38</sup> Teacher training and comprehensive health and substance abuse education were universally applied; drug-free activities and parenting support and education were also available. Specially at-risk children were referred for extra academic support and case managers linked them to remedial and protective activities. Compared to same-grade controls from previous years, by the last year of the programme fewer pupils had tried alcohol or taken alcohol, crack/cocaine

or steroids in the past month.

Another US programme randomly allocated high-risk 9–10-year-olds to the year-long (plus further inputs the following summer) intensive intervention or to a control group.<sup>39</sup> The intervention included lifeskills education, one-to-one sessions with prevention specialists, field trips, a residential summer camp, family visits, parent groups, and family activities. No differences in drug use were found at one- and two-year follow up while immediately after the programme *more* intervention children had tried cigarettes and volatile substance abuse.

Revealed by draw and write techniques, pre-teens' stereotyped conceptions of drugs and drug users do little to prepare them for the reality of drug offers ▼



WHELAN S., CULVER J., DON'T SAY 'NO', SAY DARE!N. NOTTS HEALTH PROMOTION, 1997

**1** Not to be confused with escalation theory. Gateway theory holds that more serious drug use will generally *not* occur unless less serious drugs have previously been tried. Escalation theory holds that more serious drugs will be used (or are more likely to be used) if less serious drugs have been tried.

**2** Werch C.E., Anzalone D. "Stage theory and research on tobacco, alcohol and other drug use." *Journal of Drug Education*: 1995, 25, p. 81–98. See also Guy S.M., Smith G.M., Bentler P.M. "Consequences of adolescent drug use and personality factors on adult drug use." *Journal of Drug Education*: 1994 24, p. 109–132.

**3** Turtle J., Jones A., Hickman M. *Young people and health: the health behaviour of school-aged children*. HEA, 1997.

**4** Balding J. *Young people in 1996*. University of Exeter, 1997.

**5** Swadi H. "Adolescent drug education programmes: methods and age targeting." *Pastoral Care*: June 1989, p. 3–6.

**6** Professional Association of Teachers (PAT). *Cracking drugs in schools*. Derby: PAT, 1995. Over 81% of primary schools answering a survey appeared to have no drug education policy. However, the sample was probably not representative, consisting of PAT members who responded to a questionnaire sent out with the association's journal.

**7** Her Majesty's Chief Inspector of Schools. *Drug education in schools*. London: HMSO, 1997. 43% of responding primary schools reported having a drug education policy.

**8** McGurk H., Hurry J. *Project Charlie: An evaluation of a life skills drug education programme for primary schools*. London: HMSO, 1995.

**9** White D., Pitts M. *Health promotion with young people for the prevention of substance abuse*. London: Health Education Authority, 1997.

**10** Kumpfer K. "What works in the prevention of drug abuse. Individual, school and family approaches." In: *Secretary's youth substance abuse prevention initiative: resource papers*. Washington: US Department of Health and Human Services, 1997, p. 69–106.

**11** Tobler N., Stratton H. "Effectiveness of school-based drug prevention programs: a meta-analysis of the research." *Journal of Primary Prevention*: 1997, 18, p. 71–128.

**12** Black D.R., Tobler N.S., Sciacca J.P. "Peer helping/involvement: an efficacious way to meet the challenge of reducing alcohol, tobacco, and other drug use among youth?" *Journal of School Health*: 1998, 68(3), p. 87–93.

**13** This is because the current review updates that in Hurry J., Lloyd C. (cited below) which focused on illegal drugs.

**14** Hurry J., Lloyd C. *A follow-up evaluation of Project Charlie: A life skills drug education programme for primary schools*. Home Office Drugs Prevention Initiative Paper 16 London: Home Office, 1997.

**15** Whelan S., Moody M. *D.A.R.E., Mansfield*. Nottingham: North Nottinghamshire Health Promotion, 1994.

**16** Paxton R., Finnigan S., Haddow M., et al. "Drug education in primary schools: putting what we know into practice." *Health Education Journal*: 1988, 57, p. 117–128.

**17** Baker H., Caraher M. *Do it yourself: the process of developing a drugs information resource for children*. Drugs Prevention Initiative Paper 6. London: Home Office, 1995.

**18** Dawson N. *A Survey of drugs education in Avon primary schools*. Bristol: Avon and Somerset Drugs Prevention Team, 1997.

**19** Leigh A. *Evaluation report of GEST 13B innovative drug education – the Coventry project 1996–97*. City of Coventry, 1997.

**20** Woodhouse C. *Mountfield and North Fawdon primary schools. Drugs education initiative*. Drugs Action Newcastle, 1997.

**21** Ringwalt C., Ennett S.T., Holt K.D. "An outcome evaluation of Project DARE (Drug Abuse Resistance Education)." *Health Education Research*: 1991, 6, p. 327–337.

**22** Harmon M.A. "Reducing the risk of drug involvement

among early adolescents. An evaluation of Drug Abuse Resistance Education (DARE)." *Evaluation Review*: 1993, 17, p. 221–239.

**23** Rosenbaum D.P., Flewelling R.L., Bailey S.B., et al. "Cops in the classroom: a longitudinal evaluation of Drug Abuse Resistance Education (DARE)." *Journal of Research in Crime and Delinquency*: 1994, 31, p. 3–31.

**24** Ennett S.T., Rosenbaum, D.P., Flewelling, R.L., et al. "Long-term evaluation of Drug Abuse Resistance Education." *Addictive Behaviors*, 1994, 19, p. 113–125.

**25** Clayton R.R., Cattarello A.M., Johnstone B.M. "The effectiveness of Drug Abuse Resistance Education (Project DARE): 5-year follow-up results." *Preventive Medicine*: 1996, 25, p. 307–318.

**26** Dukes R.L., Stein J.A., Ullman J.B. "Long-term impact of Drug Abuse Resistance Education (DARE). Results of a 6-year follow-up." *Evaluation Review*: 1997, 21, p. 483–500. Though not subjected to significance tests, outcomes for regular use of 'outsider' drugs were even more impressive, suggesting that the least accepted forms of drug use are the ones most susceptible to influence. On average regular use of inhalants and illegal drugs other than cannabis was cut by over half among boys and (unlike experimental use) results for girls also favoured DARE.

**27** Ennett S.T., Tobler, N., Ringwalt, C.L., et al. "How effective is Drug Abuse Resistance Education? A meta-analysis of Project DARE outcome evaluations." *American Journal of Public Health*: 1994, 184, p. 1394–1401.

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**29** Stephenson J.A., Quine S., Macaskill P., et al. *Drug awareness and use among primary schoolchildren*. National Campaign Against Drug Abuse Monograph No.8. Canberra: Australian Government Publishing Service, 1988.

**30** Tudor-Smith C., Frankland J., Playle R., et al. "Life Education Centres: an evaluation of a mobile health education resource in Wales for children." *Health Education Journal*: 1995, 54, p. 393–404.

**31** Stephenson J.A., et al, op cit.

**32** Quine S., Stephenson J.A., Macaskill P., et al. "A role for drug awareness and prevention programs external to the school?" *Health Education Research*: 1992, 7, p. 259–267.

**33** Tudor-Smith C., et al, op cit.

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**36** Wragg J. *An evaluation of a model of drug education*. National Campaign Against Drug Abuse Monograph Series 22. Australian Government Publishing Service, 1992.

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**41** Research undertaken for SCODA by Manchester Metropolitan University. In draft, 1999.